

CLAIMS

1. A human or humanized chimeric monoclonal antibody produced in a cell line selected for its properties of particular glycosylation of the Fc fragment of an antibody, or the glycan structure of which has been modified ex vivo, said antibody having an FcγRIII (CD16)-type ADCC rate of greater than 60%, 70%, 80% or preferably greater than 90%, compared with the same antibody produced in a CHO line or with a commercially available homologous antibody, characterized in that it has an ability to induce a rate of production of at least one cytokine by the Jurkat CD16 cell or a CD16 receptor-expressing effector cell of the immune system of greater than 60%, 100%, or preferably greater than 200%, compared with the same antibody produced in a CHO line or with a commercially available homologous antibody.

2. The antibody as claimed in claim 1, characterized in that it has an ADCC rate of greater than 100% at a concentration of 10 ng/ml or less, compared with the same antibody produced in a CHO line or with a commercially available homologous antibody, and a rate of production of at least one cytokine by a CD16 receptor-expressing effector cell of the immune system of greater than 1000% at a concentration of 10 ng/ml or less, compared with the same antibody produced in a CHO line or with a commercially available homologous antibody.

3. The antibody as claimed in either of claims 1 and 2, characterized in that the cytokines that are released are interleukins.

4. The antibody as claimed in either of claims 1 and 2, characterized in that cytokines that are released are interferons.

5. The antibody as claimed in either of claims 1 and 2, characterized in that the cytokines that are released are tissue necrosis factors (TNFs).

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6. The antibody as claimed in either of claims 1 and 2, characterized in that the antibody selected has the ability to induce the secretion of at least one cytokine chosen from IL-1, IL-2, IL-3, IL-4, IL-5, 10 IL-6, IL-8, TNF α , TGF β , IP10 and IFN γ , by the CD16 receptor-expressing effector cells.

7. The antibody as claimed in claim 1 or 2, characterized in that the antibody selected has the 15 ability to induce the secretion of IL-2 by CD16 receptor-expressing effector cells of the immune system.

8. The antibody as claimed in claim 1, 2 or 7, 20 characterized in that the effector cell is a CD16 receptor-expressing Jurkat cell or by a leukocytic cell, in particular of the NK (natural killer) family, or by cells of the monocyte-macrophage group.

9. The antibody as claimed in one of claims 1 to 8, 25 characterized in that it is produced in a cell line of the rat myeloma type, in particular YB2/0.

10. The antibody as claimed in one of claims 1 to 9, 30 characterized in that it is directed against an antigen of a pathological cell or of an organism that is pathogenic for humans, in particular against an antigen of a cancer cell.

11. The antibody as claimed in claim 10, characterized 35 in that its specificity is anti-Rhesus D of human red blood cells.

12. The antibody as claimed in claim 11, characterized

in that it is an anti-HLA-DR.

13. The antibody as claimed in claim 12, characterized
in that it has an ADCC rate of greater than 100% at a
5 concentration of 10 ng/ml or less, and a rate of IL-2
production by a CD16-receptor-expressing effector cell
of the immune system of greater than up to 1000% at a
concentration of 10 ng/ml or less, compared with the
same antibody expressed in the CHO line, the expression
10 line for Remitogen®.

14. The antibody as claimed in claim 12, characterized
in that it is produced in a rat myeloma line, in
particular YB2/0.

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15. The antibody as claimed in claim 10, characterized
in that it is an anti-CD20.

16. The antibody as claimed in claim 15, characterized
20 in that it has an ADCC rate of greater than 100% at a
concentration of 10 ng/ml or less, and a rate of IL-2
production by a CD16-receptor-expressing effector cell
of the immune system of greater than up to 1000% at a
concentration of 10 ng/ml or less, compared with
25 Rituxan®.

17. The antibody as claimed in claim 15, characterized
in that it is produced in a rat myeloma line, in
particular YB2/0.

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18. The antibody as claimed in claim 10, characterized
in that it is selected from anti-Ep-CAM, anti-KIR3DL2,
anti-VEGFR, anti-HER1, anti-HER2, anti-GD, anti-GD2,
anti-GD3, anti-CD23, anti-CD30, anti-CD33, anti-CD38,
35 anti-CD44, anti-CD52, anti-CA125 and anti-ProteinC;
anti-Ep-CAM, anti-HER2, anti-CD52, anti-HER1, anti-GD3,
anti-CA125 anti-GD, anti-GD2, anti-CD23 and anti-
ProteinC; antivirals: HBV, HCV, HIV and RSV, anti-
idiotypes specific for inhibitors, for example for

clotting factors including FVIII and FIX.

19. The use of an antibody as claimed in one of claims
1 to 18, for producing a medicinal product intended for
5 the treatment of cancers and of infections with
pathogenic agents.

20. The use of an antibody as claimed in one of
claims 12 to 14 and 15 to 17, for producing a medicinal
10 product intended for the treatment of cancers of MHC
class II-positive cells, in particular B-cell
lymphomas, acute B-cell leukemias, Burkitt's lymphoma,
Hodgkin's lymphoma, myeloid leukemias, T-cell lymphomas
and leukemias, non-Hodgkin's lymphomas, and chronic
15 myeloid leukemias.

21. The use of an antibody as claimed in one of claims
12 to 14 and 15 to 17, for producing a medicinal
product intended to induce the expression of TNF, IFN γ ,
20 IP10 and IL-6 by natural effector cells of the immune
system, said medicinal product being useful in
particular for the treatment of cancer and of
infections.